

We claim:

1. A method comprising:
  - i) depositing a composition on a substrate having a gap thereon, wherein the composition fills the gap and wherein the composition comprises
    - a) a colloid,
    - b) a vehicle comprising an organic solvent, water, or a combination thereof, with the proviso that when ingredient b) does not comprise an organic solvent, then the composition further comprises c) a surfactant, and optionally d) a stabilizer; and
  - ii) curing the composition.
2. The method of claim 1, wherein the colloid comprises colloidal silica.
3. The method of claim 2, wherein the colloidal silica comprises capped colloidal silica.
4. The method of claim 1, wherein the organic solvent is a protic organic solvent.
5. The method of claim 1, wherein the organic solvent is at least partially miscible with water.
6. The method of claim 1, wherein the substrate has a plurality of gaps thereon.
7. The method of claim 6, wherein the substrate is a semiconductor substrate having a plurality of ceramic gates thereon.
8. The method of claim 1, wherein step i) is carried out by spin-on depositing, dip-coating, spray-coating, flow-coating, screen-printing, or stencil-printing.

9. The method of claim 1, wherein step ii) is carried out by heating the product of step i) under substantially inert conditions.
10. The method of claim 1, wherein step ii) is carried out by heating the product of step i) under oxidative conditions.
11. The method of claim 1, further comprising removing organic solvent, water, or both, from the product of step i) before step ii).
12. The method of claim 1, further comprising:  
iii) forming a secondary coating on top of the product of step ii).
13. The method of claim 12, wherein step iii) is carried out by a method comprising repeating steps i) and ii), spin-on deposition of a film-forming material solution and cure of the film-forming material solution, or a chemical vapor deposition method.
14. The method of claim 7, further comprising:  
iii) forming a secondary coating on top of the product of step ii).
15. The method of claim 14, wherein the product of step ii) is a primary coating having a thickness about equal to height of the gates.
16. The method of claim 1, wherein the method is used to form a layer comprising a premetal dielectric layer or a shallow trench isolation layer.
17. The method of claim 16, wherein the method is used to make an electronic device comprising a LOGIC or memory device.

18. A method comprising:
- i) depositing a composition on a substrate, wherein the composition comprises
    - a) a capped colloidal silica,
    - b) an organic solvent,
    - optionally c) a surfactant,
    - optionally d) a stabilizer, and
    - optionally e) water; and
  - ii) curing the composition.
19. The method of claim 18, wherein the organic solvent is a protic organic solvent.
20. The method of claim 18, wherein the organic solvent is at least partially miscible with water.
21. The method of claim 18, wherein step i) is carried out by spin-on depositing, dip-coating, spray-coating, flow-coating, screen-printing, or stencil-printing.
22. The method of claim 18, wherein step ii) is carried out by heating the product of step i) under substantially inert conditions.
23. The method of claim 18, wherein step ii) is carried out by heating the product of step i) under oxidative conditions.
24. The method of claim 18, further comprising removing organic solvent, water, or both, from the product of step i) before step ii).
25. The method of claim 18, wherein the method is used to form a layer comprising a premetal dielectric layer, an interlayer dielectric layer, a planarizing layer, or a shallow trench isolation layer.

26. The method of claim 25, wherein the method is used to make an electronic device comprising a LOGIC or memory device.

27. A composition comprising:

- a) a capped colloidal silica,
- b) an organic solvent,
- optionally c) a surfactant,
- optionally d) a stabilizer, and
- optionally e) water;

with the proviso that

the composition has a composition surface tension less than a substrate surface tension of a substrate to which the composition will be applied.

28. The composition of claim 27, where

- A) the composition surface tension is at least about 20 milliNewtons/meter, and
- B) the composition surface tension is up to about 70 milliNewtons/meter.

29. The composition of claim 27, where

- 1) component a) is present in an amount of at least about 5%, and
- 2) component a) is present in an amount of up to about 20%.

30. The composition of claim 27, where

- 1) component b) is present in an amount of at least about 79%, and
- 2) component b) is present in an amount of up to about 90%.

31. The composition of claim 27, where

- 1) component c) is present in an amount of at least about 0.1%, and
- 2) component c) is present in an amount of up to about 1%.

32. The composition of claim 27, where
- 1) component d) is present in an amount of at least about 0.1%, and
  - 2) component d) is present in an amount of up to about 1%.
33. The composition of claim 27, where
- 1) component e) is present in an amount of at least about 1%, and
  - 2) component e) is present in an amount of up to about 10%.
34. The composition of claim 27, where component b) comprises 2-ethoxyethanol, methyl isobutyl ketone, or a combination thereof.
35. The composition of claim 27, wherein component c) comprises a nonionic surfactant.
36. The composition of claim 35, wherein the nonionic surfactant comprises heptamethyl-(propyl(poly(ethylene oxide))hydroxy) trisiloxane.
37. The composition of claim 27, wherein component d) comprises an inorganic base, an organic base, or a combination thereof.